

# 18

## Diabetes

### Goal

Reduce preventable disease and economic burden associated with diabetes and improve the quality of life for all persons who have, or are at risk for, diabetes.

### Overview

Diabetes is a major public health problem in Kentucky. Diabetes was the fifth leading cause of death in 2004, affecting an estimated 7.5 percent of the adult population. Kentucky ranks seventh among the 50 states for the highest prevalence of diabetes (2003). The prevalence of diabetes has steadily risen since the mid-1990s. A portion of this increase may be related to increased efforts to diagnose previously unrecognized diabetes or changes in the diagnostic criteria for diabetes. Nevertheless, this upward trend is expected to continue into the near future because of population characteristics and the rising prevalence of certain lifestyle risk factors for the disease.

Prevalence of diabetes is highest among men, individuals of African American descent, those aged 65 and older, and those living in the Appalachian region of the state. Death rates due to diabetes are also higher among men and African Americans in Kentucky. In fact, the age-adjusted death rate due to diabetes for African Americans (147 per 100,000) in 2002 was almost twice the comparable rate for the white population (78 per 100,000).

The medical complications of diabetes create an additional burden on the health care system in Kentucky. Specific problems include diabetic ketoacidosis, non-traumatic lower extremity amputations, cardiovascular and cerebrovascular disease, and end-stage renal disease. During 2002, there were 96,320 diabetes-related hospitalizations in the state. Direct and indirect costs due to diabetes in the Commonwealth were estimated at \$2.9 billion in 2002. These costs and the impact of diabetes on the population can be reduced through modification of lifestyle risks, early diagnosis, appropriate health care, and informed self-care.

### Summary of Progress

Progress is being made toward achieving the 2010 objectives. Considerable improvement in the rate of lower extremity amputations has been made, with a decline from the 2000 baseline of 6 per 1,000 to 4.4 per 1,000 in 2002. The percent of adults who have a glycosylated hemoglobin measurement at least once a year has increased from the 2000 baseline of 82.9 percent to 86.9 percent in 2004. Significant improvement has also been achieved in persons with diabetes who perform self-blood glucose monitoring daily, with an increase from 55.1 percent in 2000 to 61.7 percent in 2004. Behavioral Risk Factor Surveillance System (BRFSS) data indicate that persons with diabetes who take an aspirin a day or every other day has increased from 47.6 percent in 2000 to 55 percent in 2003. Progress was made in persons with diabetes who receive formal diabetes self-management training, increasing from 45.7 percent in 2000 to 48.8 percent in 2004. Reducing anomalies in infants of mothers with diabetes has improved from 266 per 1,000 in 1998 to 234 per 1,000 in 2002. In 2000 the percentage of persons with diabetes who had annual foot exams was 63 percent. This percentage declined slightly to 62 percent in 2004.

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Progress has been slow, however, in decreasing the prevalence of diagnosed diabetes. The rate has increased from 6 percent in 1996-98 to 7.5 percent in 2004. The diabetes death rate has also climbed from 76 per 100,000 in 1999 to 78 per 100,000 in 2002. The incidence rate for diabetes-related end stage renal disease (ESRD) has also increased. In 1998, 11.9 per 100,000 persons with diabetes had ESRD. The 2002 rate increased to 14.8 per 100,000. The percentage of annual flu vaccinations in persons with diabetes has shown a slight improvement from 52 percent in 1997 to 54.9 percent in 2004. BRFSS data showed that 75.5 percent of persons with diabetes had an annual eye exam in 2000. However, the percentage decreased to 70.5 percent in 2004.

## Progress toward Achieving Each HK 2010 Objective

Summary of Objectives for Diabetes	Baseline	HK 2010 Target	Mid-Decade Status	Progress	Data Source
18.1. (DELETED)					
18.2. Decrease the rate at which the prevalence of diagnosed diabetes is climbing so that it reaches no more than 6 percent of the population 18 years and older.	5.0% (1996-98)	≤6%	7.5% (2004)	No	BRFSS
18.3. (DELETED)					
18.4R. Limit the upward trend in the diabetes death rate to the 1999 base-line of 76 per 100,000.	76/100,000 (1999)	≤76/ 100,000	78/100,000 (2002)	No	Vital Statistics
18.5. Slow the rise in deaths due to cardiovascular disease where diabetes is listed as either a supplemental cause of death or an existing condition to no more than 276 per 100,000 diabetic population.	283.3/ 100,000 (1997)	≤276/ 100,000	334.2/ 100,000 (2002)	No	Vital Statistics
18.6. (DELETED)					
18.7R. Reduce the frequency of anomalies in infants of mothers with diabetes to no more than 233.3 per 1,000 births.	265.9/ 1,000 (1998)	≤233.3/ 1,000	234.3/ 1,000 (2002)	Yes	Vital Statistics
18.8R. Maintain the frequency of foot sores lasting more than four weeks to no more than 13 percent among persons with diabetes.	Adults: 13% (2000)	≤13%	14% (2003)	No	BRFSS
18.9. Reduce the frequency of lower extremity amputation to 5.4 per 1,000 persons with diabetes.	6/ 1,000 (2000)	≤5.4/ 1,000	4.4/ 1,000 (2002)	Target Achieved	HOSP and BRFSS
18.10. (DELETED)					
18.11R. Decrease the incidence of diabetes related ESRD that requires dialysis or transplantation to no more than 11.3 per 100,000 population.	11.9/ 100,000 (1998)	≤11.3/ 100,000	14.8/ 100,000 (2002)	No	Tri-State Renal Network
18.12. (DELETED)					
18.13R. Increase to 90 percent the proportion of persons with diabetes who have a glycosylated hemoglobin measurement (A1C) at least once a year.	Adults: 82.9% (2000)	≥90%	86.9% (2004)	Yes	BRFSS
18.14. (DELETED)					
18.15. Increase to 80 percent the proportion of persons with diabetes who have an annual dilated eye exam.	Adults: 75.5% (2000)	≥80%	70.5% (2004)	No	BRFSS

R = Revised objective

## Progress toward Achieving Each HK 2010 Objective

Summary of Objectives for Diabetes	Baseline	HK 2010 Target	Mid-Decade Status	Progress	Data Source
18.16. Increase to 70 percent the proportion of persons with diabetes who have at least an annual foot exam.	Adults: 63% (2000)	≥70%	62.1% (2004)	No	BRFSS
18.17R. Increase to 56 percent the proportion of persons with diabetes over 40 years of age that take aspirin daily or every other day.	47.6% (2000)	≥56%	55% (2003)	Yes	BRFSS
18.18R. Increase to 65 percent the proportion of persons with diabetes who perform self-blood glucose monitoring at least daily.	Adults: 55.1% (2000)	≥65%	61.7% (2004)	Yes	BRFSS
18.19R. Increase to 49.8 percent the proportion of persons with diabetes who have received formal diabetes self-management training.	Adults: 45.7% (2000)	≥49.8%	48.8% (2004)	Yes	BRFSS
18.20. Increase to 80 percent the proportion of persons with diabetes who receive an annual influenza vaccination.	Adults: 52% (1997)	≥80%	54.9% (2004)	Yes	BRFSS

R = Revised objective